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ABSTRACT

The central role of education in national development, clearly recognized by developing countries and by development assistance agencies, is to decide what kinds of education should be provided for which people and at what costs, and to help attain objectives of national development. The collateral issue of deciding how the resources of the Agency for International Development (AID) is discussed. The content is threefold. First, an examination of some of the indices, evidence and trends of educational development during the past decade are considered. Secondly, a review of some of the more important AID activities in education during that same period establishes a general profile of priorities. Finally, basic concepts, principles, and actions which can guide AID in its educational activities of the 1970's arise from an analysis of AID investments in education and an AID strategy in education. Ten statistical tables of financial obligations for the 1960's and 1970's are appended. (Author/KSM)

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THE A.I.D. EDUCATION PROGRAM STRATEGY

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AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C.
SEPTEMBER, 1973

PREFACE

The central role of education in national development is clearly recognized by developing countries and by development assistance agencies. The basic issue, therefore, is to decide through what kinds of education, for which people and at what costs the objectives of national development are best attained. A collateral issue, but one of central importance to the Agency for International Development, is to decide how our resources may most usefully contribute to the improvement of education for development.

This Sector Statement on Education is in no sense a definitive response to either of these issues; it is rather a thoughtful analysis of our past experience, and an indication of the main directions our support of educational development will take in the future.

These directions are based on our perceptions of the evolving problems of educational development, and of the relatively limited role which this Agency can play in it. They are put forward without dogmatism, but with the conviction that the approach indicated and the program emphases identified constitute an important and distinctive role for the Agency to play in education for development.

The Statement indicates significant past achievements in education by LDCs through use of their own resources, and with the help of development assistance agencies. It also identifies some of the major problems remaining to be solved, particularly those in which the Agency has, or can create, the resources necessary to make an important contribution. It recommends redoubled efforts to relate learning, both in and out of schools, to overall development goals.

The objective of helping to provide more useful education for more people at feasible costs is not a new one in AID. The real significance of the Statement is that it defines an approach and a set of priorities for AID through which this objective may be more effectively achieved.

John A. Hannah
Administrator

SECTOR STATEMENT

ON

EDUCATION

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AGENCY FOR INTERNATIONAL DEVELOPMENT

SECTOR STATEMENT ON EDUCATION

I. INTRODUCTION

One measure of the difficulty of judging what should or can be done about education in the future is that we cannot perceive very clearly what has happened in education in the recent past. Even in a much longer perspective, it is hard to link causes and effects, costs and benefits, inputs and outputs in a clearcut and definite way. Few human endeavors are as beset by variables, inconstants and unknowns as education. Its proper objectives and content have been in dispute throughout history, and remain so. From the hermetic learning of ancient Egypt to the "learning to be" of the Faure Commission, the purposes of education have been contested ground.

Even those who could approximately agree on the proper aims of education have often found themselves in strenuous argument with regard to how these objectives were to be achieved, and this also continues.

In the crucible of science, education, in many of its fundamental aspects, remains a mystery - how and why people learn (or fail to learn), the variables of learning endowment, the cultural imperatives which govern motivation, the strange biological curve which describes the progress of learning.

Education is an ill-defined and elusive thing, part mystical and part scientific, part knowledge and part value. In the broad sense of assimilated human experience, education remains essentially a secular theology, partaking of emotion and intellect, symbolism and reality, faith and knowledge, ritual and rational method.

Nevertheless, every successful society has grasped the essential fact that a reasonably effective and realistic learning system is essential for its survival and growth. Every modern nation, moreover, has acknowledged that its learning system must reach a large proportion of its citizens, with knowledge useful to them as individuals, and to enable them to participate in solving the internal and environmental problems of their societies.

The central role of education (or learning) in development is therefore not in dispute. The basic issue is that of what kinds of learning are to be provided for how many people, at costs a given

country is able to pay. A secondary, but nonetheless vital issue, is that of the most appropriate role of external assistance to developing countries in meeting their learning needs and objectives.

These issues are not new; they have been major concerns of both developing countries and development assistance agencies from the beginning. But the perceptions of both developing countries and development assistance agencies with respect to the proper responses to these issues have gradually changed. In fact, they have now changed so radically that both face the need for substantial revision of their strategies for development of learning systems.

Perhaps the most fundamental revisions are in our earlier assumptions about what education is, who could and should profit from it, how it should be conducted, how long it takes and what it costs. Put more succinctly, we must modify some of our past assumptions about the relationship between education and national development.

In the early stages of development, it was widely assumed that when education became a national priority, supported by high policy and large scale commitment of funds, it would rapidly permeate whole populations and, in a fairly brief time, transform "old" societies into "new" societies. It was believed that education would be the catalyst for a wider and more equitable distribution of opportunity and income, health and security, within the context of improved political systems and social orders. It was to be the touchstone for the social, economic and technological skills necessary to create and maintain modernized, self-generating economies within two or three decades.

It is now clear that none of these things has happened on the scale or within the time we assumed. Both developing countries and development assistance agencies under-estimated the problems of societal change, and over-estimated the role which education could play in it. Our earlier assumptions about the nature, costs, time required and role of education in development have not been borne out.

This does not indicate that education as an instrument of development has failed; it does indicate that education did not achieve all the goals which might reasonably have been expected of it, and that we have held unreasonable expectations about what it could produce. It suggests that serious efforts must be made to strike a better balance between the potentials of education and the goals we assign to it.

The optimism of the First Development Decade has tended to give way to a pervasive pessimism which may well be no more realistic than our past assumptions. In our concern about the many and

manifest problems of education in the developing countries, we tend to overlook the real and substantial achievements of the past two decades.

If we consider the educational base from which the developing countries began, their progress has been remarkable, both quantitatively and qualitatively. If, instead, we consider it from the standpoint of their current and future educational needs, it falls far short in quantity, quality and rate of progress. Greater realism can be achieved only by a candid examination of both.

Both the achievements and the problems of educational development are shared by the development assistance agencies. They have helped the developing countries, in some cases, to find the high road to progress; in others, they have joined them in exploring what proved to be blind alleys. The aims and priorities of development assistance agencies were related to but never fully congruent with those of the developing countries. The developing countries were required to give attention to all the areas of educational development; the assistance agencies were required, by their roles and resources, to be selective in the areas to which they would make major commitments. An analytical look at the nature and consequences of these similarities and differences can perhaps be helpful in charting collaborative efforts in the future.

The amount of AID investment in education has remained relatively stable for the past twelve years, but as a fraction of investment in LDC education it has declined substantially. Moreover, the distribution of this investment, by purpose, category and country has changed significantly. It appears essential that if the Agency is to make the most effective use of its educational investments in the future, further well-conceived changes are required.

The purpose of this Sector Statement is therefore threefold: (1) to examine some of the indices, evidence and trends of educational development during the past decade, (2) to examine some of the more important AID activities in education during that same period, and (3) to suggest some basic concepts, principles and actions which should guide the Agency in its educational activities of the 1970s.

II. EDUCATIONAL DEVELOPMENT IN THE 1960s

Serious, widespread concern about educational development began in the 1940s. The 1950s marked a period of strenuous effort to expand education at all levels, primarily building upon traditional and outmoded systems. By the beginning of the 1960s, however, it had become evident that there were sharp limitations to the expansion of traditional education, and, even more important, much of it was

irrelevant to the most urgent needs of national development. This led to a restatement of educational priorities as a component of the United Nations Development Decade.

Judging by their stated commitments, and, largely supported by their commitments of resources, the primary educational goals of the developing countries in the First Development Decade were:

1. To produce the high-level professional, technical and administrative manpower required for national development, and to create the institutions necessary for producing such manpower.

2. To bring about universal literacy - defined as basic competence in reading, writing and arithmetic; and a basic system for maintaining such literacy,

3. To increase educational opportunity at all levels to meet the growing social and economic demand for it, and

4. To provide for greater equity in access to education at all levels, for all economic and social groups.

That these goals were more in the nature of statements of national aspiration than realistic educational goals for a single decade is now clear. Moreover, the definitions of education and literacy were based on concepts of education which have proved, in many ways, unrelated to the most urgent learning needs of development. These definitions are changing but the new meanings of education are slow to be reflected in the re-orientation of national education systems. Moreover, any effort to appraise progress toward these several goals is confronted by an astonishing inadequacy of knowledge which can be brought to bear upon them. The facts we have about educational development provide only a crude and unreliable profile of what has actually happened.

For example, we have rough indications of the magnitude of public expenditures for education (estimates vary from $12 to $18 billion), but we know virtually nothing about private expenditures for education. Least of all do we know the educative effects of more modern agriculture and industry, urbanization, political independence and mass communications.

Scanty as our knowledge is about the inputs to education, it looms large by comparison with our knowledge of the outcomes. We know that higher education makes disproportionate demands on public expenditures for education; we are by no means sure of the relative value of this investment as compared with investment in other levels or modes of education, or in other development sectors.

In short, we have only limited indices of schooling in developing countries, and even less knowledge about learning in those countries.

A further but related problem is that no two countries start from the same point, move in the same direction or achieve the same rate of progress. As a consequence, overall data frequently conceal more relevant information than they disclose. To lump all the developing countries together, or all countries within a developing region, or even all areas in a large country, can be almost as misleading.

Although general indices have these defects, they nevertheless have value in identifying broad common problems and achievements of the developing countries. It is, therefore, worthwhile to review some of the standard (though by no means precise) statistical information related to educational development.

School Enrollments

In total quantitative terms, the increase in numbers of school age children enrolled in school is impressive. Between 1960 and 1970, school enrollments increased in all regions at about 6 per cent annually, almost doubling the number in schools.

There is substantial evidence to show that education from grade 1 through 5 is the most cost effective of all education, provided that the five grades are successfully completed. This unfortunately is not the case in many of the developing countries; in half the countries of the world, about 50 per cent of the children enrolled fail to complete the third year in school. Other studies show that the incidence of dropouts and repeaters necessitates from 12 to 17 school years to produce one sixth grade graduate.

The most dramatic increases in enrollments occurred at secondary and higher levels of education during the decade.

University level enrollments more than doubled in all three regions.

The education of women showed a historic change. During the decade, the enrollment of females kept pace with total enrollments, and at the level of higher education increased at an even faster rate than total enrollments.

These achievements are substantial by any standard. However, two factors tend to obscure their real significance. First, the very narrow base of education at the beginning of the decade suggests growth rates out of proportion to the absolute numbers involved; and second, the school age population increased more rapidly than

the population at large. As a result, while enrollments at all levels increased by around 100 per cent, the percentage of school age youth enrolled in school increased by only 6 per cent in Africa, 9 per cent in Asia and 10 per cent in Latin America. The percentage of school age youth in school for the three developing regions was about 40 per cent; if we assume the same rates of population growth and school enrollments during the 1970s, and the same modes of education, by 1980 there will still be no more than 50 per cent of school-age youth in school. At the present time, more than half the populations of developing countries have never been to school, less than 30 per cent of their young people go to secondary school, and less than 5 per cent go on to higher education.

The inescapable conclusion is that unless developing countries resort to significantly different and more efficient educational systems, they will fall farther behind in meeting their own national needs for education.

Quality and Relevance of Education

As disconcerting as the above figures may be, the current concern of development assistance agencies - and developing countries - turns more upon the "relevance" and "quality" of the education provided than upon the numbers exposed to it.

In expressing concern about the subject matter and quality of education in the LDCs, it is quite possible that the problem is being both ill-defined and over-stated. There is no doubt that many developing country school systems remain trapped in 19th century educational curricula and methodologies. But it is highly questionable that the overall quality of education has declined, or that the subject matter is wholly irrelevant.

As a generalization, it seems certain that the quality of LDC education has improved during the past decade, and in some countries it has improved substantially. (This observation relates to national education systems, not to the few schools available only to the well-to-do families). Rote learning persists, but it is widely undergoing reform. Teacher education has been re-oriented, new materials and methodologies are gradually being introduced. The quality of education at the university level, around the world, not only has been greatly expanded, it has improved substantially in breadth, quality and relevance.

Recently there has arisen a growing awareness of the divergence between what LDC schools teach and the knowledge required by LDC people to improve their "quality of life." This is, without doubt, a serious problem, but it also can be over-stated.

For example, there is a tendency to blame the kind and quality of education for a whole host of problems, such as unemployment, urban migration and ill-health.

Although education can bear on all these problems, their real origin lies in structural imbalances and anomalies - political, economic, and cultural. When these are attacked effectively through direct action, education can be a powerful instrument for facilitating change. When they are not, education is relatively ineffective in producing change, or does so only over unacceptable periods of time.

There is, of course, no question about the need and the possibilities of relating education more realistically to economic and social requirements. But it is equally important to understand what education cannot do. One of the great disabilities under which education labors is the tendency to assume that it can or should solve problems which arise from factors entirely outside its purview.

It would probably surprise many critics of developing country education to know how much is, in fact, taught about health, hygiene and the social skills required for adjusting to a changing society. The fact that such instruction does not overwhelm the family pattern of behavior, or the cultural verities in which the children live, simply corroborates what American educational research has discovered here at home.

These observations are in no way a defense of school systems which teach less useful things to too few people at costs a poor country can ill-afford. It is a reminder that while schooling in the developing countries is far less effective, for the individual and for society, than we would like it to be, it is probably far more useful than we tend to concede. This seems to be borne out by research, which shows a high correlation between number of years of LDC schooling and propensity for adapting to new ideas and practices in agriculture, industry, and, indeed, almost every aspect of "modernization."

Costs and Benefits

Public expenditure for education in the developing countries increased at an annual rate of about 11.8 per cent throughout the decade of the 1960s. It was highest in Asia, at 14.1 per cent, with Latin America at 11.3 per cent and Africa 10 per cent. As a percentage of public budgets, education expenditures in the developing countries compare favorably with those of the United States, Europe and the Soviet Union. For all countries of the world, the figure is about 16 per cent. For Africa it is about 16.4 per cent, Latin America 15.4 per cent and Asia 13.2 per cent.

But with 75 per cent of the young people in the world, the developing countries were able to spend only 10 per cent of the amount committed

by the developed countries for education. Although public expenditures for education increased by upward of 100 per cent, rapidly rising population and costs per pupil held the increase in the percentage of school age youth enrolled in school to about 8 per cent.

There are few reliable cost/benefit indicators for education in the developed countries; and those we have are even less applicable in the developing countries. One consequence is that there is a continuing controversy with regard to whether the developing countries invest too much, too little or incorrectly in education. It is generally agreed that LDC education is internally inefficient and externally far less effective than it should be. While this judgment is no doubt partially correct, it must be tempered by two considerations: resources require that the per pupil expenditure of funds be kept very low, and judgments based upon economic hypotheses can be very misleading when applied to LDC education.

For example, some economists insist that vocational training in formal educational institutions makes little sense on either educational or economic grounds, and there is considerable empirical evidence that this is true in many countries. What is frequently overlooked is that the problem arose in large part because many of the early assumptions about growth and diversification in the economy - particularly in the modern sector - were unrealistic.

The main problem with vocational education, as we see it now, appears to be that it was conceived, conducted and financed far too much in the mode of the developed countries, rather than as an adjunct to specific development goals and activities.

Another case in point is rural education. Here again, there are few indicators which bear directly on the great disparity of educational opportunity between urban and rural populations. Thus far, a very large proportion of educational expenditures has been in urban areas, despite the fact that most of the people in the LDCs live in rural areas. In total numbers, rural populations continue to grow more rapidly than urban ones, and this trend appears likely to continue for the rest of this century.

Moreover, rural educative influences and experiences are far less available and diversified than they are in towns and cities. Thus, the present pattern of educational opportunity tends strongly to deprive the largest segment of the population of both formal schooling and learning from a diversity of environmental experience.

The costs of extending equal educational opportunity to large widely dispersed populations are high, particularly through use of traditional methods. And it is not at all clear what the benefits of such an investment would be. In some instances it has produced greatly enhanced acceptance of more modern agricultural practices; in others

increased migration to urban centers of the brightest young people in the countryside.

But the most interesting, and, in some ways, the most controversial of all are developing country investments in higher education. This is so for two reasons: (1) it represents one of the largest investments and most dramatic growths of any aspect of education, and (2) it bears most immediately and most directly upon all aspects of development.

In 1960, there were approximately 150 universities in Asia, 28 in Africa and 141 in Latin America for a total of 319. In the single decade of the 1960s, this number increased by 263 institutions, 84 in Asia, 52 in Africa and 127 in Latin America. The legitimacy of their claim to university status varied widely, but all these institutions asserted the claim and many deserved it.

At the same time, substantial numbers of new research institutes were being established - 25 in Asia, 45 in Africa and 37 in Latin America.

In short, during this ten-year period, the number of university-level institutions in the developing regions almost doubled - from 431 to 801.

At the same time this enormous growth in the number of new universities and research institutes was taking place, almost all the older institutions were engaged in major modernization and renewal. Both new and old received large-scale support from their national governments and, many of them, very substantial assistance from external donor agencies.

There are allegations, in some cases probably justified, that the universities are simply building new elites, not markedly different in motivation or behavior from the old ones. Some of them have a growing number of unemployed graduates, trained in disciplines with little relevance to development, or refusing to move to the towns, villages and countryside where their skills are needed. The methods of financing them produce serious inequities between those who benefit from higher education and those who pay for it.

On the other hand, the absolute requirements for strategic manpower and institutions have been very substantially ameliorated. The great majority of the developing countries now have universities and professional institutions capable of producing most of their requirements for highly trained manpower. A large and growing segment of leadership in every aspect of development is now being provided by graduates of developing country universities.

During the past few years, universities and research institutes have assumed increasing responsibility, as institutions, for greater contributions to national development. In the field of agriculture,

it seems clear that many developing countries would now be facing famine if these institutions did not exist.

This development of higher education may be viewed from many standpoints - as an unwise and unwarranted investment of scarce resources, or as far-sighted, necessary action to accelerate development and achieve intellectual parity in the world community. Or, of course, something in between, depending upon the circumstances of each individual country. The fact appears to be that no one can say with any certainty what the consequences have been or will be, ten or twenty years in the future, of this massive investment in higher education, or what the benefits and costs would have been of alternative forms of investment.

It seems clear, however, that inasmuch as many LDC institutions of higher education now exist, with trained staff and reasonably modern facilities, that further investments in higher education should be designed to capitalize upon what exists - to strengthen weak spots, to make programs and curricula more relevant to national development needs - in short, to get the most and the best from what is in place.

Teachers

Despite the doubling of students in school during the decade, the ratio of teachers to student kept pace reasonably well. Using the developed countries as a measure - 1 teacher to 25 students - Latin America has 1 for 32, Asia 1 for 36 and Africa 1 for 40.

Existing research tends to indicate that this ratio of teachers to students is by no means an insupportable one. Indeed, in a few countries, notably Korea, the expansion of education is predicated upon a deliberate increase in the number of students per teacher. With improved teaching methods and better materials, it is quite possible that an increase in this ratio is one of the few promising possibilities for expansion of education at an acceptable level of quality.

Materials

One of the remaining pervasive problems of LDC education is that of teaching materials and methodologies geared to their uses.

It has become increasingly clear that one of the keys to both quantitative expansion and qualitative improvement of education is shifting more of the initiative in learning to the learner. Yet there is no way of doing this without the materials by which self-instruction can take place.

As in the case of teachers, every developing country has made efforts to improve the quality and availability of learning materials, so far without any marked success.

One basic problem is that the education budgets of developing countries are almost totally absorbed by the salaries and other fixed operating costs of their school systems. Any growth in budgets is instantly devoured by inexorably rising costs of education.

Another problem is that few countries have people qualified to create high quality instructional materials, or publishing and distribution systems to make them widely and inexpensively available.

Many development assistance agencies, including AID, have attempted to help developing countries solve, or at least substantially ameliorate, the educational materials problem. Although there have been a few relative successes, and recently some promising new approaches have been tried, the problem remains one of fundamental importance to educational development.

Methodologies - Technologies

The issue of methodologies and technologies of education does not, of course, stand apart from teachers or learning materials. In fact, throughout the decade, nearly all LDCs considered that methodological and technological changes could be effected only through improvements in teacher education and use of teaching materials. While development assistance agencies frequently had higher expectations from such improvements than were apparently warranted, there nevertheless were significant gains in the quality of instruction through these improvements.

Toward the end of the decade, however, it became increasingly clear that two things were happening: (1) the marginal improvements in methodology and technology of education were not making education effective enough, or attractive enough, to hold and provide acceptable education for the children in school, and (2) the slow rate at which the proportion of school age youth in school was growing meant that in many countries there was no prospect in the foreseeable future of education for more than fifty to sixty per cent of the young people needing it.

It was at this point that two major concepts began to be taken seriously - radical educational reform in the schools, based upon extensive and systematic use of new communications and instructional technologies, and application of these same technologies, in different ways, to reach large out-of-school populations both young and adult, with useful learning opportunities.

These concepts have steadily gained ground conceptually, but only a few countries have found ways to implement them on a significant scale. And there are important problems associated with both.

There is however, accumulating experience which tends to show that the new instructional media and technologies do have great potential for both in-school and out-of-school populations. And unless this potential is fully developed and utilized, the prospects for more and better education for the people of the developing countries are dim indeed.

Other Factors Bearing on Educational Development

In many ways, the most significant development in education during the past decade has been the learning experience of educational and political leaders. All the problems which have been discussed here are now well known to them. The objectives, methods and subject matter of education are more open to question than they have ever been before, by developing country leaders themselves.

They no longer have to depend on imported wisdom or foreign experience. They have all been through at least a decade of struggle with the costs, deficiencies and consequences of their school systems. Nearly all of them now recognize that more useful education, for more people, at costs they can even hope to pay require not only the reform of school systems, but a more systematic and sustained effort to create national learning systems, in which nearly everybody has access to some form of useful learning. Moreover, in almost every country there is a substantial number of highly qualified professionals who are fully aware of the problems, constraints and alternatives which confront them. Comparative knowledge and experience are being more widely shared; reform and innovation have become accepted as educational imperatives.

There are a few countries in every developing region which have gained valuable experience with the new educational technologies; many countries are now seriously investigating the potential of out-of-school education for development; and nearly all of them are more realistically facing the issue of educational finance, cost and efficiency.

The physical as well as the human infrastructure for educational development has improved enormously.

This does not mean that solutions to educational problems will be easy or assured. Experience has shown that there is no quick, inexpensive way of providing useful education for whole populations; that development of "human resources" is the most expensive, complex and lengthy process in any society.

Educational leaders in the developing countries have learned these things the hard way. They, and we, know that educational development in the decade of the 1960s did not fully succeed, but neither did it fail. It succeeded in that the developing countries built better traditional educational systems for far larger numbers of their people than ever had access to education before.

The problem of this decade is twofold. One part is to build non-traditional learning systems that can reach very large proportions of their people, with useful knowledge, at acceptable costs. This will require new educational concepts, the design of new systems, testing of those systems before they are fully designed and application before they are fully tested. The other parallel need is to make significant incremental improvements in the traditional systems, which will continue to bear much of the educational load. A third implicit need is to develop appropriate divisions of labor and mutually supportive linkages between the "traditional" or formal learning systems and greatly strengthened non-formal systems.

III. AID INVESTMENTS IN EDUCATION: PRIORITIES AND EDUCATIONAL DEVELOPMENT 1960-1970

(Note: The Appendix to this Statement contains a number of tables which show in some detail the magnitude, nature and distribution of AID's past and projected expenditures in education for FY 1960-75.)

The General Profile

In the period 1960-70, the Agency for International Development invested about $1.8 billion in education in 70 developing countries. Of this amount $1.38 billion was directly in the education "sector" (Code 600) and $423 million was in clearly identifiable education components of other development sectors, principally agriculture, health and sanitation, labor and public administration.

Although AID investment in education was substantial, as a percentage of total economic assistance it was very small. During the FY 1960-70 period, AID's obligations for all economic assistance totalled $27.3 billion; obligations for the education sector were $1.3 billion, or 5 per cent of the total. If we include the education components of development sectors other than education, the percentage rises to only 6.6 per cent.

Examined by the three main obligation categories, obligations for the education sector were 6.2 per cent of the grants, 2.5 per cent of the loans and 8.1 per cent of the local currency.

Because of the many different ways in which technical assistance funds have been made available, and the inadequacy of the records accounting for them, it is not possible to specify the percentage of technical assistance project funds obligated for education. An inspection of such records as are available and relevant suggests that education accounted for roughly 20 per cent of such funds.

From FY 1962 through FY 1970, AID obligations for the education sector remained relatively stable--averaging around $142 million a year.

Of the total obligations for the education sector for the decade, the obligation by Region was in Asia $503.5 million, followed by Latin America at $407.6 million, Africa at $266.1, and Supporting Assistance countries at 87.7 million. AID/W obligations accounted for $137.8 million.

It does not appear possible to make a clear-cut judgment with regard to the appropriateness of the total funds allocated to education, or of the distribution of such funds by region. It does appear (1) that the Agency

has allocated less funds, as a percentage of its total development assistance, than has been commonly assumed, (2) that substantial funds have been committed to authentic educational activities not classified or accounted for as education, and (3) more detailed analyses are required for a more factual estimate of AID's past, present and future investments in education.

Neither is there any objective way of evaluating the results of AID's investments in education. As we have seen, even the monetary obligations are, in many cases, impossible to quantify accurately. When we enter the area of qualitative results, we must depend almost entirely on reason and informed judgment.

This is true in large part because, as has been noted earlier, in education the relationships between causes and effects, inputs and outputs are hard to establish. Although some significant evaluation efforts have been made over the years, they do not add up to definitive conclusions regarding AID's assistance to education.

There are some generalizations, however, which seem to be supported by facts, reason and judgment: (1) AID's investments in the 1960's were a major and, on the whole, positive force for educational development, (2) despite some legitimate differences of view, their main emphases were fundamentally sound, and (3) the magnitude of AID's obligations and methods of implementing them, largely through non-governmental institutions, paid great dividends to both developing countries and to American education.

These generalizations are in no way intended to obscure the fact that there were individual project failures; some of these resulted from ill-conceived projects, poor management or bad luck. In other instances, developing countries simply did not have the stability, administrative talent or perseverance to follow through on well-conceived programs.

Nevertheless, looked at in the large, the numerous, diverse and long-term educational development enterprises supported by AID have been substantially successful. In some cases, AID assistance has been crucial to the achievement of major educational objectives.

High Level Manpower

About half of our total obligations for education were for the development of institutions of professional and higher education. This was clearly responsive to a major educational need of the LDC's in the 1960's: to produce the professional, technical and administrative manpower required for national development, and to create the institutions necessary for producing such manpower.

Through the expenditure of these funds, some of the best professional and educational talent of American universities was brought to bear directly upon the rapid development of some 100 LDC universities, professional schools and higher research institutes.

Nearly all these efforts were designed to achieve qualitative improvement in teaching, research and professional services in sectors critical to development. In terms of funds and technical assistance, agriculture ranked first, as fundamental to the lives and livelihoods of most of the people in all the developing countries. Few, if any, would challenge the proposition that the Agency's investments in agricultural development, through education, research, and institutional services was its single most important contribution to development in the 1960's.

Expansion and improvement of higher education to produce the professional and technical leadership for whole systems of education was a comparable priority. While measurement of progress in education is more difficult than in agriculture, it seems clear that the assistance provided by AID significantly improved the capabilities of the developing countries to educate their own leaders for political, economic, technological and social development.

In addition to participating in development of higher education in the developing countries, some 170 U.S. universities provided, under AID contracts, undergraduate and graduate education for around 70,000 developing country nationals.

At the middle manpower level, AID invested $94 million in technical education, including teacher education, in 59 developing countries. Although the evidence is not clear regarding the effect of these investments on the quantity and quality of technical manpower, they undoubtedly were highly beneficial in many countries.

In short, AID investment in higher and technical education was an important factor in enabling substantial numbers of developing countries to achieve a large measure of self-reliance in producing their own high and middle level manpower.

Elementary and Secondary Education

In these areas also, AID's efforts were directed primarily at qualitative improvements, in system management, curriculum reform, learning materials and educational methodologies. A substantial part of these efforts were through teacher training and education programs.

The degree to which elementary and secondary education were perceived as an AID priority varied considerably within and between Regional Bureaus. For example, the Latin America Bureau obligated $14 million for elementary

education but slightly less than half that amount for secondary education. On the other hand, the Africa Bureau obligated twice as much ($30 million) for secondary education. The Asia Bureau obligated small amounts for both, except in two countries where large amounts of U.S. owned local currencies were used in elementary education. These figures probably do not reflect accurately all the investments AID made in elementary and secondary education. Many educational activities were conducted and coded under other sectors; teacher education was considered a sub-category under "technical education," and a number of important teacher education projects were of a composite type and classified as "Other - Miscellaneous."

The result of all this was that students in many LDC's had access to higher quality education than otherwise would have been available. Thus AID contributed significantly to achievement of another LDC educational goal--improvement in educational opportunity at all levels to meet the growing social and economic need for education.

Literacy and Equity in Education

These two major educational objectives of the LDC's at the start of the Second Development Decade have proved, perhaps, the most elusive of all.

Most countries, with the aid of UNESCO and other agencies, have mounted literacy programs of substantial size, but the present judgment is that few of these have achieved the real objectives of the struggle against illiteracy. Despite the fact that in 1970 the number of literates had increased and the illiteracy rate had declined, there were 50 million more illiterates than a decade earlier.

Neither has there been attained anything approaching equal access to education in most developing countries. The very poor, the rural populations and the socially or ethnically isolated continue to have least access and the lowest quality of education.

In retrospect, it appears that perhaps the Agency espoused too completely the "from the top down" concept of educational development. In any event, only minor obligations were made for basic (literacy) education, for rural populations, women and girls or migrants to urban areas. Few efforts were directed at achieving more equitable sharing of education costs and benefits, or in reaching out-of-school populations with useful learning opportunities.

These problems were reocgnized, but they are open to direct action by development assistance agencies only when there is greater recognition of the problems and priorities for action by the developing countries themselves. AID therefore sought to assist the LDC's in formulating concepts, building institutions and evolving delivery systems which enable them to attack these problems more effectively.

Instructional Technology

For the first half of the decade, the attention of all developing countries and development assistance agencies was focused upon the building of traditional systems of education, albeit adapted to local needs. Considerable attention was given to improved teaching materials and methodologies. But the fact that these would prove shortly to be inadequate in terms of quality and wholly unable to cope with the need for providing access to learning for large proportions of LDC populations was not widely perceived until late in the 1960's.

A few countries experimented with specialized applications of modern communications media, and AID provided assistance to a number of them. In 1965 AID began support of a substantial program to introduce instructional TV in El Salvador, and in 1968 funded a major evaluation of the program. In 1967, the Agency provided support for a sizeable radio-correspondence program in teacher education in Kenya. In 1966 major support was provided to the Government of South Vietnam in the development of instructional materials and technology. In all, by 1970, the Agency had funded 14 projects in communications technology for development, totaling $4.5 million.

The small and tentative nature of efforts to develop educational technology in the 1960's is understandable, for several reasons. Experiments with and applications of communications media for education had proved both expensive and inconclusive in the United States. The skills and knowledge for introducing educational technology effectively in the LDC's were minimal.

However, during the decade, three important new elements entered the picture (1) evidence mounted that traditional, even marginally improved and expanded, schooling could not even ameliorate substantially the problems of education in the LDC's, (2) new communications and instructional systems entered a period of extraordinary growth and development, and (3) developing countries were acquiring modern communications systems, and the ability to manage them, for purposes other than educational development.

The consequence was that by the end of the decade, encouraged by enactment of Section 220 of the Foreign Assistance Act, the Agency began a serious, significant and long-term effort to assist in the development and application of communications technology to achieve education objectives.

Costs and Benefits of Education

As in the case of technology, worldwide concern about the costs and benefits of education did not arise until relatively late in the 1960's.

Earlier in the decade, public budgets for education were expanding at the rate of 12 per cent per year; international assistance agencies were providing substantial sums for education development; per capita costs of education were still relatively low; enrollments in secondary and higher education, where costs were higher, were still a minute proportion of total enrollment.

The benefits of education--almost any kind of education--were assumed to be great. Education was generally regarded as the touchstone of "modernization" and development, and was therefore believed to be worth whatever it cost. Faith was particularly placed in the benefits of technical and higher education, the two most expensive forms.

Development assistance agencies, including AID, tended to share these views. The long land grant college tradition of the United States provided AID with a strong bias in favor of agricultural, engineering and technical education; but the doctrine of universal literacy as a prerequisite to social and economic development also was largely accepted.

One consequence of this was that the Agency invested essentially all its education funds--probably in excess of 90 per cent--in formal schooling/education, and well over half of it in higher and technical education. Since it was obvious that no external agency could begin to assume in every country the costs of large-scale expansion of education, the qualitative improvement of formal education/schooling was accepted as the proper role for AID. (It should be noted, however, that AID did contribute significantly to non-formal learning through technical assistance in other sectors.) While this focus on quality was undoubtedly correct, one result was that the benefits of better education were accompanied by rapidly increasing unit and total costs.

In the second half of the decade expanding budgets for education began to collide with budgets for other essential development sectors. Annual rates of increase in educational expenditures leveled off, then began to taper off.

Concurrently, the phenomenon of the "educated unemployed" began to appear in more and more countries. The inordinate costs of technical and higher education became more obvious when graduates could not find acceptable jobs.

For these and other reasons, the second half of the decade produced the growing "crisis in education." However, even after the financial problems of educational development were recognized, our knowledge base was totally inadequate to provide useful guidance to the developing countries in this area. Both LDC's and development assistance agencies had growing apprehensions about the benefits of schooling/education, while every system

remained caught in the iron grip of rising costs. It was not until the last year of the decade that AID and other assistance agencies formally addressed themselves to the central issue of costs, benefits and efficiency of education.

Distribution by Country

In all Regions, investments in education were largely concentrated in a few countries. In general, these appear to have been selected because they were large, relatively advanced educationally and, therefore, capable of pace-setting in their region. In some instances, these considerations apparently do not apply, and there were presumably other reasons for large educational investments in them.

At the other end of the scale, there were many countries which received so little assistance that they could not have benefited materially unless the projects were of a particularly creative research and development type. This does not appear to be the case. Moreover, these tended to be the very least advanced countries whose main benefit from AID projects was participation in the relatively large amounts of funds programmed on a regional basis.

AFRICA BUREAU

Of the 32 African countries receiving aid in education, 6 (Nigeria, Ethiopia, Liberia, Sudan, Guinea and Libya) received 50 per cent of the funds programmed by country. Eighteen of the countries received only 5 per cent of the total and the remaining 8 received 19 per cent.

However, 26 per cent of the total funds obligated for education in Africa were for regional activities. Even these regional funds tended to benefit most the countries receiving large direct grants and loans. Most of the eighteen receiving least assistance did participate substantially in regional educational development projects and in training abroad.

ASIA BUREAU

During the decade, 15 countries of Asia received educational grants and loans. Six of these countries (India, Afghanistan, Philippines, Indonesia, Korea and Turkey) received 56 per cent of the funds programmed by country. Ten per cent of the total funds were programmed for regional projects and the remaining 10 countries received 34 per cent of the total.

LATIN AMERICA

During the decade, the Agency obligated funds for educational development in 25 countries of Latin America. Large loans, made late in the decade, radically increased AID assistance to three countries--Brazil, Chile and

Colombia. These three countries received 50 per cent of the educational funds AID invested in Latin America. Another nine countries received 25 per cent of the total and 5 per cent was obligated for regional projects. The remaining 13 countries received 20 per cent of the total.

Supporting Assistance Countries

The shifting of countries among Bureaus makes securing precise overall data very difficult. However, the countries now included in the Supporting Assistance Bureau--Jordan, Laos, Khmer Republic, Thailand and South Vietnam, received AID assistance for education. All received substantial amounts, with 52 per cent in South Vietnam, 23 per cent in Thailand, 13 per cent in Laos and the remaining 12 per cent shared by Jordan and the Khmer Republic.

Loans

Late in the decade, the Latin America Bureau began making substantial loans in education. This very significantly increased the funds obligated for education in Latin America. But the bulk of these funds was authorized in FY 1969-70 and disbursements are very largely scheduled for FY 1971-75.

Of the $300 million in 51 loans authorized, 83 per cent was in Latin America, 10 per cent in Africa and 7 per cent in Asia.

Participant Training

The participant training program was (and is) one of the largest and most sustained educational programs supported by AID. It began in 1942 when Latin Americans were brought to the United States for training. In 1948 it was expanded under the Marshall Plan, as part of the rehabilitation of Europe following World War II.

In the decade of the 1960's, an average of about 15,000 participants per year, from the developing countries, received training under this program, in the United States and third countries. The costs of this program averaged in excess of $40 million per year. A very significant aspect of this program is that cooperating countries share in the total costs of participant training. Most countries pay the costs of international travel of their participants, bear most of the costs of preparing participants for departure, and many countries maintain the participant's family through continuing salary payments during the training period.

Virtually all the obligations for participant training were investments in LDC education. However, these were spread over all sectors and were for a great variety of education, ranging from short term specialized or on-the-job training to academic graduate and even post-doctoral programs.

Technical Assistance as an Educative Factor

By its very nature, all technical assistance is in some degree an educational activity. The sharing of knowledge and experience in dealing with specific problems is undoubtedly one of the most effective of all modes of learning.

During the decade, AID invested $11.6 billion in development grants, about 25-30 per cent of which was in the form of technical assistance. Of the total development grants only 6.2 per cent was classified as "education." It therefore seems reasonable to assume that technical assistance activities, other than those classified as education, made a very important contribution to the learning of developing countries, in fields central to national development.

It would be impossible to quantify this contribution or to specify its educative effects. Nevertheless, any sensible appraisal of the Agency's investments in education must take serious account of its overall technical assistance program.

IV. AID INVESTMENTS IN EDUCATION - FY 1971-75

There are significant similarities and differences in the pattern of AID investments in education for the periods FY 1960-70 and FY 1971-75. To some extent these arise from the fact that half of the latter period constitutes projections in which firm program commitments have not been made. However, certain trends can be detected which merit examination.

The General Profile

The total A.I.D. program in support of education during FY 1971-75 is expected to be at about the same level on an annual basis as the 1960-1970 period - $166 million per year for 1971/75 versus $164 million for 1960/70 (see tables II and X). The largest part of this will be loans ($307 million), and of the loans, sector loans will make up the bulk. Technical assistance outlays directly in the education sector are projected to be $174 million during the period but an additional $195 million is projected for education technical assistance through other sectors.

Active technical assistance projects, funded by Regional Bureaus, total $157 million for the five-year period. Projected technical assistance projects bring this total to $174 million, or an average obligation rate of about $35 million per year. This is roughly half the amount obligated for such projects annually during the FY 1960-70 period.

Since three of the five years in this period were projections, it seems likely that obligations for this period are under-stated. Moreover, with the present thrust of the Agency toward new and more innovative modes of educational activity, obligations during this period are less predictable than would normally be the case.

Some increase in centrally funded research and development projects is contemplated, but these amount to only 2-3 per cent of the total.

The one very significant new fact revealed by this analysis is that the Bureau of Population and Humanitarian Assistance has become a very major factor in AID supported educational activities. The obligations of PHA in education require further analysis, but the basic figures have been reviewed and validated by that Bureau.

It is rather startling to note that during the five years beginning FY 1971, PHA obligations and projects for education total almost as much as the technical assistance obligations of the four Regional Bureaus combined. (PHA $162 million as compared with $174 million of all Regional Bureaus.)

Another remarkable feature of the FY 1971-75 trend is that the percentage of AID's investments in education through other sectors shows a sharp rise. During the period FY 1960-70, such obligations were 23 per cent of the total obligations for education while in the 1971/75 period they amounted to 44 per cent.

This trend has profound implications for Agency strategy in education; it seems to indicate that the Agency's investments in education have become increasingly development problem oriented rather than education oriented.

When we examine AID's overall investments in education for FY 1971-75, they compare favorably with those of the 1960s, but reflect a trend toward funding education as a component of other development sectors.

Similarities and Differences

Among the several major similarities between the program in education during FY 1960-70 and FY 1971-75, is first, the continuing emphasis on professional and higher education, and relatively stable obligations for technical education. Second is the continuing trend in Latin America, and lack of it in other Regions, towards large scale funding of education through project and sector loans.

A third is the tendency to extend old projects and a concomitant small number of new starts. Of the 104 active technical assistance projects in education in FY 1972, 69 were over five years old and 32 were 10 years old or older. Only 24 new technical assistance projects were initiated by Regional Bureaus in FY 1971-73. Ten of these were in Africa, 9 in Asia, 4 in Latin America and 1 in Supporting Assistance.

The age of a project, of course, is not a good single criterion of its merit. Significant institution building projects usually should have a commitment of five years, and in some cases even more. However, there are other types of projects in which five years should see the project phased out as completed or not worth continuing. Even institution building projects should be required to present very special justification after ten years.

Without attempting to assess the merit of any individual project, it would appear that the large number of old projects and the small number of new ones indicated that the changes in Agency philosophy and policy with regard to its objectives in development are not yet adequately reflected in its pattern of obligations for education.

There were also marked differences. One of the most important has been noted - the large scale obligations for education through other development sectors, particularly in population.

It should also be noted that total expenditures for education in the 1960s included large amounts of U.S. owned local currency. During the FY 1971-75 period, such expenditures will be minor.

Another important dissimilarity is the emphasis during the current period on educational innovation, research and development, and concentration by TAB (and to some extent by Regional Bureaus) on the key problem areas of educational technology, non-formal education and educational finance, costs and efficiency. However, these new program concepts are still evolving and are not yet significantly represented in the Agency's total obligations for education.

In fact these new concepts account in some measure for the paucity of new project starts in education since FY 1971. Traditional educational projects have been increasingly looked upon with skepticism, and neither the Agency nor the developing countries have made the transition from new concepts to new programs.

V. TOWARD AN AID STRATEGY IN EDUCATION

The concepts, principles and actions proposed in this Section do not constitute a strategy for LDC educational development. Such a strategy must be primarily designed by those who have the authority to make strategic decisions and the resources with which to implement them. This means that educational strategy properly rests with the leaders of the developing countries.

The role of the Agency for International Development is, therefore, not to design educational strategy, but to influence and facilitate it, in areas in which our knowledge, experience and financial resources can be a constructive force in helping to achieve strategic goals.

To play this role effectively, however, requires that we join with the developing countries in a continuing search for more realistic goals in education, for more effective methodologies to achieve those goals, and for better instruments for measuring results. The concepts and principles by which we are guided, and the actions we take can become an evolving AID strategy in education.

Even in this limited definition of strategy, regional and country variations are necessary. Although there are worldwide commonalities in educational development, there are also important differences.

The educational strategy of each country, to be successful, must be based on a realistic assessment of its particular objectives, resources and constraints. To the extent a country strategy appears wisely conceived, the AID response should become a helpful element in implementing that strategy. When it appears ill-conceived, the AID role should be to assist in evolving modifications or alternative strategies.

This in no sense means that we are qualified to sit in judgment on strategic decisions of developing countries. It does mean that we must judge where and how our limited resources can be most usefully employed in achieving progress in education.

Sector Analysis

Although the methodology of sector analysis is still relatively undeveloped, its basic concepts are absolutely critical to any well-conveived strategy in education. A careful, systematic analysis of each education/learning system (formal and non-formal) is necessary to gain a balanced view of its goals, resources, constraints and internal relationships.

It is equally important that sector analysis in education lead to a balanced view of its external relationships.

Most professional educators (and this is largely true in all sectors) focus their attention upon educational development as a relatively self-contained system. The fact that education is only a part, although an important one, of the larger system of national development is often insufficiently recognized in educational planning and practice.

More than perhaps any other development sector, the internal functioning of education affects its external relationships with all other sectors. Indeed, it is at these points of intersection that education succeeds or fails.

The concept of sector analysis in education therefore must include not only the whole system of education but its multiple intersections with other sectors, such as agriculture, industry, health and public service.

This type of analysis is, of course, not easy, but neither is it impossible. It need not necessarily be highly technical or require complete data. It must be a systematic and rigorous examination of all the component parts of an education/learning system; their relationships to each other; their critical intersections with other sectors, and the ways and degrees to which they contribute to achievement of the goals of national development.

There has been some tendency by developing countries, and in AID, to regard sector analysis as a passing fad, or a new obstacle to be overcome in providing or receiving educational assistance. This is not the case. Actually it is a belated recognition that the only possible solution to the problem of providing better education for more people at bearable costs is more effective analysis of the goals, inputs, delivery systems and outputs of education/learning systems, leading to wiser decisions regarding availability of resources, their utilization and comparative benefits. To view sector analysis as an exercise to justify external assistance is to miss the main point - that the largest gain, by far, is in more effective utilization of a country's own resources. Consequently, stress should be on assisting LDCs to build sector analysis capabilities, so they can get better answers for themselves regarding effects of alternative actions.

Without these kinds of analyses, sound strategies of educational development cannot be constructed by developing countries; without them AID has no dependable basis for appraising the validity of country strategies or of determining where and how its own resources can most fruitfully be invested.

Such analyses obviously will lead to different conclusions regarding AID investments in different countries. The essential thing is that AID and Missions have the same objectives and utilize the same analytical concepts in arriving at program decisions. To that end, AID should give a high priority to further development of such concepts and methodologies, in collaboration with the developing countries.

Project and Program Criteria

Competent sector analysis is essential but it is not a sufficient guide to AID priorities in educational development.

At the present time AID investment in LDC education is roughly 1 per cent of the total invested by the developing countries themselves, and only about 10 per cent of the total provided by all external development assistance agencies. Although these percentages vary substantially from country to country, in no case are they more than a very small fraction of the total investment in any country.

This simple equation defines the basic element in any AID strategy - each project must be based upon a significant potential gain from a relatively or absolutely small investment of funds. The question of whether any specific project has merit within itself, while still an essential criterion, does little to establish its claim for AID support. The real issue is that of whether the strategic investment of AID

funds gives reasonable promise of triggering or making possible changes in education which make it better, cheaper or available to more people, through better utilization of other funds, provided by the host country or by other donors.

This leverage principle is, of course, a familiar one in AID, but it has been better enunciated as a doctrine than applied as a program rule. However, there are now several factors which make more rigorous application necessary and possible.

First, the reduced availability of development assistance funds places a high premium upon investing more wisely in high priority projects, with great potential multiplier effects. Second, the Agency's view of educational development objectives and of our role in helping LDCs achieve them is more sharply focused than it has been before. This is increasingly true, as well, for developing countries. Moreover, our continuing attention to project and program evaluation techniques, and methods of improving analysis of cost/benefit factors should strengthen progressively our ability to assess the comparative leverage of various kinds of educational support activities.

It therefore seems possible and desirable for the Agency to formulate criteria which provide overall guidance beyond the individual country approach indicated for sector analysis.

Among these criteria, the following deserve careful consideration.

Does the project, or cluster of projects, appear to have a significant potential for:

1. Providing more useful (relevant) education/learning on an expanding scale. (Subject matter, quality, methodology, delivery systems.)

2. Providing useful education to a significantly larger clientele at acceptable unit and total costs. (Relevant materials, mass media.)

3. Reaching populations which are disadvantaged educationally - (Rural, urban poor, women, families.)

4. Improving "holding power" of schools to reduce drop-outs and repeaters. (Making learning more real, more interesting, more participatory.)

5. Improving articulation of components of the education system - (between levels of formal system and between formal and non-formal.)

6. Improving the content, methodology and technology of school systems or out-of-school education. (Educational system reform.)

7. Introducing innovations for the foregoing purposes in delivery of knowledge, skills and attitudes in respect to critical development sectors - (Effective components of education in other sector projects - health, population, nutrition, agriculture).

8. Providing more effective approaches to financing, cost reduction and efficiency of school systems. (New resources, more effective allocation and utilization, greater equity in educational costs.)

9. Encouraging and assisting institutions in evolving and playing a more effective role in education for development (Universities, industries, labor unions, cooperatives).

10. Advancing the "state of the art" in any of the above, with particular reference to communications technology for development, out-of-school education/learning, and educational finance, costs and efficiency.

Obviously, no project or group of related projects is likely to meet more than a few of such criteria. But every project should clearly meet at least some of them, and in so doing include a generative or multiplier effect which will continue with or without further AID funding.

The Research and Development Approach

During the 1960s, there were many instances of imaginative programming in education. Although the concept of innovation had not been as explicitly stated as it has been more recently, there was considerable innovation in many AID-supported projects.

Nevertheless, in retrospect, these innovations can be seen as relatively minor variations on old themes. The plain and urgent problems of education today require innovations of a different order, in which risks are incurred to achieve large potential gains. Thus far, the Agency has been willing to take them only in isolated cases.

The risks of innovation can be minimized by building research, development and evaluation components into every project. At the very least, there is a gain in knowledge, which if positive, is of great value; and, if negative, indicates what should be avoided or done differently in the future.

In the 1960s, centrally funded technical assistance, research and institutional development projects in education were minimal and produced relatively little of creative value. The reasons for this are various and somewhat controversial, although the basic reason would appear to be undue dispersion of very limited resources.

It now appears that with concentration on a few key problem areas, begun in 1970, these central funds are being more fruitfully utilized. Three institutional development grants have been approved by the Agency, one in instructional technology (Florida State University), one in alternatives to traditional educational programs (UCLA) and one in educational finance, costs and efficiency (U. of California at Berkeley). Another such grant in low cost instructional technologies is now pending (Stanford University).

Substantial technical assistance funds have also been invested in these areas, and in non-formal education.

These activities represent significant forward movement in the key problem areas, but can in no real sense be considered adequate responses to the problems.

The crux of the matter is that the central funds for research, development and evaluation are not now, and as yet give no promise of becoming, adequate to enable the Agency to make sufficient contribution in helping the LDCs find better ways of providing more useful education, for many more people at acceptable costs.

Of the total obligations made by AID for education, central funds for general technical services, research and development, institution building and evaluation are only 1-2 per cent. This clearly requires upward adjustment as a percentage of total obligations for education, not necessarily as central funds, but as a priority component in all Agency funds invested in education.

There is little prospect of breakthroughs, or even adequate progress in the kinds of innovations which the Agency now seeks unless research, development and evaluation in education becomes a high priority of the Regional Bureaus and major Missions.

In addition to the bulk of the funds, the Regional Bureaus have a continuing planning and management capability in the field, major responsibility for project design and implementation, day-to-day relationships with host institutions and, thus, a powerful opportunity to encourage and assist in developing a research, development and evaluation outlook. In such an environment, central funds for these purposes could become far more useful. It would provide readier access

to trials and full-scale applications in the field, and more intimate association with AID Missions and host country institutions. Productive networks of research and development effort, embedded in operating LDC education systems and providing mutual reinforcement between many LDC organizations and selected developed country institutions, would become feasible.

A corollary of comparable importance is the building up of research and development capabilities in LDC institutions. In education, this has been very largely neglected. Probably the most important single observation of the Faure Commission bears directly on this subject.

> "We propose that agencies assisting education, national and international, private and public, review the present state of 'research and development' in education with a view to strengthening the capacities of individual countries to improve their present educational systems and to invent, design and test new educational experiments appropriate to their cultures and resources. We believe that if nations, regional bodies and assisting agencies make the strengthening of these capacities their first order of business over the next ten years, they will enable a number of countries to begin becoming true 'learning societies'."

AID should adopt this proposal as a cardinal feature of its strategy in education, and encourage other donor agencies to do so. Of all the resource bases to be built for development, the most important ones will be those in the developing countries.

Program Development Emphases

In 1970, TAB established, after wide consultation in and outside the Agency, three "key problem areas" in which to concentrate its efforts. These were educational technology, non-formal education and educational finance, costs and efficiency. As demonstrated by its obligations of funds, the Agency had already established university development as a worldwide area of concentration for AID.

It is therefore proposed that the Agency formally designate four areas of program development emphasis in education: (1) Education Economics and Analysis, (2) Educational Technology, (3) Non-Formal Education, and (4) Strengthening Higher Education for National Development.

The rationale for this is simple. They are, in fact program emphases by action or deliberate decision of the Agency. They are all related to central objectives of educational and national development; they are all related significantly to each other; the problems associated with them are increasingly of concern to developing countries; and the experience and talent of the U.S. are at least equal to, and in some cases hold a comparative advantage over, other development assistance agencies. These areas get at the heart of the educational development problem of the 1970s.

However, this in no way suggests that there should not be full and careful attention to other areas of education in particular countries, as indicated by sector analysis in each country. Neither does it suggest that these key program emphasis areas should necessarily remain fixed.

The basic reasons for such program emphasis areas are (1) to concentrate our efforts and thereby facilitate mobilization of the best possible U.S. capability to respond to LDC requests; (2) to direct more coherent attention to them as areas, and to the points at which they can be made to reinforce each other more effectively, and (3) to bring to bear in an integrated way the various assistance tools available, in packages appropriate to specific projects or programs.

In each emphasis area, there are three strategic aims: (1) strengthening LDC capabilities in solving key educational problems, (2) strengthening U.S. capabilities to assist the LDCs in key program areas, and (3) facilitating and supporting interaction between the best capabilities on both sides in solving problems. Developing our "network" mode of operating is seen as an effective organizing strategy to serve all these purposes simultaneously.

Program Emphasis One: Education Economics and Analysis

This program emphasis addresses the need for improved analysis of the education sector, leading to better diagnosis of deficiencies; improved

design of, and planning for change; and more careful attention to what we shall call the economics of education - embracing such things as funding, costs and efficiency, as well as employment and income distribution effects of education programs.

Education Economics. The growing disparity between educational needs and educational resources is one of the most dramatic developments of the past decade. This occurred even with rapidly growing investments in education by developing countries. With the leveling off of educational expenditures, the gap between educational needs and resources continues to widen. This dilemma arises from several interrelated factors: (1) gross inadequacy of total funds available for education, (2) serious inefficiency in the allocation and utilization of the educational resources available, and (3) lack of knowledge regarding practical alternatives in funding, reduction of costs and measurement of outputs.

The basic problem is by no means one of resources alone. Archaic systems of education are costly; but the subject matter and methods of instruction of such systems are such that the educational product is often of relatively low value to social and economic development.

On the side of the external efficiency of education systems, the rise of the problems of the educated unemployed has put into sharp focus the very complex issues of the relevance of education to development. Looking at education as an economic investment, it is clear that the specific intellectual and manual skills needed in particular economies will vary over time as the economies develop.

Systems of different kinds, of differing life-spans and flexibility will be needed if scarce educational resources are to make an adequate input into each country's human resource development requirements. Education also has numbers of other "outputs" not directly related to individual economic productivity, but which are also very important for the development process and development objectives. An outstanding example is the observed strong inverse relationship between levels of education of women and their fertility.

In all these aspects of the relation between education and development, surprisingly little can be said with any authority as to the correct choices that ought to be made among many alternatives. However, now that the questions are emerging with greater clarity, it will be important for the LDCs, and interested donors, to undertake research and experimentation that can throw more light on some of the major choices concerning educational systems, technologies, and content.

AID's effort to make progress in this crucially important and difficult area consists of four major elements:

1. To develop new knowledge and insights with respect to educational finance, costs and efficiency in developing countries, through problem-oriented research, field investigations, and dissemination of knowledge and comparative experience.

2. To develop new or improved tools for analyzing present and potential resources for education; for measuring educational inputs, resource allocation and utilization, and outputs; and for comparative studies of costs and benefits of various kinds and modes of education for different learning clienteles (e.g., rural populations, families) including attention to the employment and income distribution effects of different kinds of educational programs.

3. To improve the capacity to provide LDC and U.S. nationals with education, training and experience in critical aspects of education economics.

4. To participate in a functioning network of institutions in both developing and developed countries in this field.

Improved Analysis for the Education Sector. AID has determined that it will approach development problems through a "sector emphasis", and has established sector analysis as a means to this end. For those who are concerned with the education sector, it has become more and more obvious that the things that can be done to expand learning opportunities and improve delivery of education services must be planned in a larger framework, designed to take advantage of latest research and development efforts. Even relatively small, single project educational development endeavors must be more carefully planned and integrated into the total national development fabric. The reasons for this are threefold. First, funds for educational development assistance are limited and new investments of any type must be carefully planned for maximum pay-off and multiplier effect. Second, when substantial changes are contemplated in one part of the education sector, they will affect other parts. The interrelationships must be considered and the total effects of modifications anticipated and understood as fully as possible. Third, innovations and new directions must be continually sought and, when they have promise, must be introduced quickly. Analysis undergirds the development and implementation process; it is absolutely essential to successful innovation.

Probably a distinction should be made between analysis of a sector (usually termed Sector Analysis), and analysis within a sector. Both kinds of analysis hold much promise.

Sector Analysis refers here to the employment of a wide range of measures that will result in a comprehensive appraisal of all the major elements of the total education sector. In its most highly developed form, it may involve complicated model-building and extensive quantification.

In most cases, however, it will consist of a more systematic and analytical appraisal of the education system, its component parts, their inter-relationships, external effects, costs, efficiency and relevance to national (or local) needs and problems.

Within-sector analysis refers to a great many activities, from quite modest efforts with little quantification, to more complex endeavors, but not as broad as sector analysis in scope. It has to do with designing small projects of low cost, to larger projects requiring substantial investments and having potentially far-reaching effects.

The important thing is that we not focus on comprehensive sector analysis to the exclusion and detriment of improved analysis within the education sector. It is frequently more feasible and desirable to improve key elements of a system than to attempt to improve a system as a whole. By emphasizing the whole range of analysis possibilities for the education sector, we will be in a more flexible position to help solve smaller specific problems, or to focus on key points for intervention, as well as to assist in planning reforms of systems as a whole. Our work in analysis should include, therefore, a systematic look at the relation of objectives, whether addressed to the education system as a whole or to one or more of its component parts.

While several development assistance agencies have worked out approaches that have promise, there is no "dogma" that requires that sector analysis embrace a given number of measures or depend upon certain kinds of techniques. The requirements of the situation should dictate how far analysis goes, what tools it employs, and what measures it produces.

Above all, it must be clear that improved analysis for the education sector has the purpose of improving decision-making; it is not something engaged in for its own sake.

Program Emphasis Two: Educational Technology

This program emphasis essentially addresses the need to make the learning process more effective and accessible, whether in formal or non-formal programs of education.

We define educational technology as a systematic way of designing, carrying out, and evaluating the total process of teaching and learning, in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and technical resources to bring about more effective instruction.

This definition encompasses the newer electronic media such as television, films, radio, computers, together with the older technologies such as textbooks and visual aids.

As educational technology is brought to bear on existing educational systems, it tends to stimulate reform and renewal, as for example in El Salvador and South Korea. Indeed, there is a growing number of countries which have made, or are making, firm, long-term commitments to educational technology as a major instrument of development, for both in-school and out-of-school applications. In addition to Korea and El Salvador, other examples are Colombia, Guatemala, Ivory Coast, and Mexico. The experience of these countries will be crucial in establishing a knowledge base on which other developing countries can build.

AID's work in educational technology rests on the following set of principles:

1. Focusing on pilot and operational projects which aim at major breakthroughs to make the learning process more effective and accessible.

2. Providing qualified professionals to help make these pilot efforts successful.

3. Assisting in the development of programs that are problem-oriented, not communications-media-oriented. The approach is to work toward solving key problems rather than searching for uses of available technology.

4. Assisting in the development of professional competence on the part of LDC personnel, with particular stress on systems-oriented project planning, project administration, quality content, careful evaluation, and planning for continuing innovation.

Our overall effort, then, is essentially a research and development program, directed toward assisting the LDCs to choose, try out, perfect, and evaluate systems which hold significant promise.

The developing countries are turning more and more to education technologies as a promising way of alleviating their education/learning problems for both in-school and out-of-school populations. AID envisages a significant step-up in research, development and experimentation with educational technology during the next few years. However, this can bear fruit only if the Agency as a whole makes a firm commitment, in both policy and program terms, to a much more purposeful support of communications technology for development in every sector. Such support must, of course, include rigorous analysis of costs, relative efficiency, effects on employment and other economic issues.

Program Emphasis Three: Non-Formal Education

This program emphasis addresses the need to create a richer variety of learning opportunities in addition to those afforded by existing graded school systems.

The potential of non-formal education has been amply demonstrated in in the more developed societies. In such diverse countries as the United States and the Soviet Union, non-formal educational activities are as varied as and comparable in scale to those of formal education.

With regard to LDCs, we know that non-formal education historically has been the primary mode of learning. However, we are just beginning to understand how these modes have carried over and been modified to meet modern problems. Studies which have been made thus far by AID, IBRD, UNESCO and the LDCs themselves broadly suggest that, properly developed and supported, non-formal education is perhaps the only way that widespread diffusion and application of practical knowledge and skills for development can effectively be achieved.

Experience in both developed and developing countries has demonstrated that:

1. Non-formal education can be valid, high quality education for imparting "life" skills and knowledge. It need not be third-rate education.

2. It can reach large numbers of people where they live and work. It can impart useful knowledge, skills and recreation without removing people from their normal environments and responsibilities.

3. Non-formal education can be highly diverse in organization, funding and management. It can emphasize local initiative, self-help and

innovation on the part of large numbers of people and their local institutions. Every successful learner can become in some degree a teacher.

4. It can pay at least part of its own way initially and in the longer term increase employment, productivity and social participation.

5. It can make learning a national, life-long experience, compatible with the interests of individuals and communities, for all economic levels of a society.

Much of what has been said of the strategy for educational technology is equally applicable to non-formal education. However, there are significant added dimensions encompassed by AID strategy in this area.

1. To establish the concept of non-formal education as a type of education, distinct from formal education systems, but potentially capable of providing non-school populations with educational services systematically and in ways which significantly serve individuals, societies and the purposes of national development.

2. To study, document and disseminate information on successful LDC examples of non-formal education which appear suitable for experimentation and application in other LDCs.

3. To provide professional and financial support for research, experimentation and implementation of those models which appear most promising, or for new concepts which appear worthy of testing.

The LDC need is to establish the concept of national education/learning systems, encompassing both formal and non-formal components, with a suitable division of labor and coordination between them.

Although developing countries and AID Regional Bureaus have shown serious interest in non-formal education, as one promising way out of the educational dilemma, this interest has proved slow in crystallizing into concrete projects or programs.

To accelerate this process, it is proposed that AID, as a further measure, commit itself to direct funding of LDC institutions for studies, experiments and when appropriate, for full scale trials of non-formal education projects. Such projects would be cast in the research, development and evaluation mould, and supported by U.S. institutions under contract to AID for development of the non-formal education area.

Program Emphasis Four: Strengthening Higher Education for National Development

This program emphasis addresses the need to strengthen university capabilities to (a) produce high-caliber leaders with professional

and technical competence required for national development, and (b) provide more relevant research and services in identifying and helping to solve the real and immediate problems of development.

From the outset of the U.S. development assistance program, the universities in the LDCs were perceived as being one of the main engines of development. As indicated earlier, since 1960 AID funds obligated for higher education were of the order of $900 million, or about half of our total expenditures in education. The largest part of these funds was for contracts with U.S. universities to provide institutional development assistance to LDC universities. Many other development assistance agencies, public and private, have also made major contributions to LDC university development.

There can be little doubt that these investments have enabled many LDC universities to achieve a capability in teaching, research and, potentially, in community and national services which would have been entirely out of the question had these investments not been made. Although our support has declined somewhat, higher education in the LDCs is still one of our largest technical assistance activities.

A few of these universities are beginning to play the major role in national development envisaged for them by their own countries and by external agencies which provided assistance. Many are reaching a level of institutional maturity and professional competence which can enable them to play such a role.

The transition from internal development to effective, problem-oriented service to their societies is not easy for universities anywhere. For developing country universities, this transition presents special problems: for many, the concept of an externally oriented university is new; most lack experience with non-academic services in a community or national context; they frequently have difficulty in finding common ground for understanding and cooperation with their governments and with political, economic and social institutions; and, of course, they are all confronted with limited resources to do an increasingly large and complex job.

The magnitude of AID's past investments and the growing potential of LDC universities for contributing to national development argue strongly for our continuing support, but with a different concept and in a different mode.

The length and nature of the engagement of American higher education with real-life problems in our society suggest that they have much to offer LDC universities in achieving this transition. Many U.S. universities have gained great experience and interest in collaborating with LDC institutions. There is great mutuality of interest and value in fostering effective relationships between U.S. and LDC universities. There are few people in the U.S. or LDCs

who believe that an abrogation of these relationships would be in the interest of either, and it clearly leaves incomplete the role which this country has sought to play in university development over the past two decades. The final phase is to effect a transition from large-scale institutional development support of individual LDC universities to a long term and mutually advantageous relationship between U.S. and LDC universities, in contributing to national development.

That the Agency is now at a point of decision regarding our future role in their activities is clearly indicated by the present nature and trends of our investments in them. At the beginning of FY 1973, AID was providing support to 42 LDC universities - 18 Asia, 13 in Africa and 11 in Latin America. However, of the contracts with U.S. institutions for providing these services, 37 were due to expire or be renewed in FY 1973 or 1974.

Judging by projections made by the Regional Bureaus, many of these will be continued on a declining **scale**: for the five years FY 1971-75, the total projected for professional and higher education is about $60 million, or roughly $12 million per year. This compares with an annual rate of obligations of $36 million for the preceding eleven years.

We have already "phased out" support of a sizable number of LDC universities in which AID made substantial investments in the past. The present trend, if continued, could result in severe damage to the links forged between U.S. and LDC universities through investment of over one-half billion dollars in AID funds.

This program area therefore envisages major changes in concept, management and funding rather than development of a new field. The heavy investments previously made by the Agency, and the relationships built between U.S. and LDC institutions, make this feasible and desirable.

Though there are exceptions, what LDC universities need and want is not a return to (or continuation of) the relationship of the 1960s but a different, more economical and sustained set of relationships for the 1970s and 1980s.

As AID obligations for higher education have declined, it has become evident that a new and enduring arrangement is required to maintain joint U.S.-LDC university collaboration (1) which emphasizes mutual access to each other in solving problems of mutual concern, (2) at a scholarly, professional level, rather than as formal exchanges between governments and (3) at moderate costs shared by participating universities and development assistance agencies.

This is not a new or untried concept. The Africa Bureau has employed something very similar to it for fostering U.S.-LDC university relations, with a specific focus on the role of the university in development, through

the Overseas Liaison Committee of the American Council on Education. Some elements of the concept are present in the arrangements of the Asia Bureau with the Asia Society. The Latin America Bureau has fostered such relationships in a variety of ways.

For many years Britain has supported U.K.-LDC university relations through the Inter-University Council on Higher Education Overseas, and recently this program has been expanded and funded by the U.K. Overseas Development Administration. The testimony of the IUC and LDC university officials is that this arrangement has tremendous value at relatively modest costs.

There are still important but uncompleted tasks of university development in the LDCs to which AID should give continuing attention through traditional or new types of contracts with U.S. institutions. However, with the phasing down of AID investments in higher education abroad, the growth of competence of LDC institutions, and transition to a collaborative style of U.S.-LDC relationship in development, new and imaginative ways of establishing effective, permanent links between U.S. and LDC universities can be of great mutual advantage.

Some of the types of functions that should be provided for are:

1) To maintain on-going dialogue between U.S. and LDC universities on their institutional development and role in national development;

2) To develop highly flexible capabilities for responding to specific short-term technical collaboration needs and problems as expressed by the LDCs, including getting people together who work on common problems;

3) To maintain more purposeful concern with the in-flows and out-flows of LDC and U.S. university students and scholars, including analysis of the consequences of these flows and of changes needed;

4) To establish effective mechanisms for providing the margin of assistance needed to make possible collaborative programs between U.S. and LDC university elements where the collaborating institutions each participate because of their own program self interest, where the primary support is from their own resources, and there are significant benefits for both; and

5) To build a suitable knowledge base for carrying on the foregoing activities, as well as the necessary base for high level relationships between the university communities in the U.S. and LDCs.

The fostering of such relationships between U.S. and LDC universities has a natural corollary in special direct support of selected LDC universities which demonstrate a significant commitment to and potential competence in contributing distinctively to national development. A few universities now clearly are at this point, and many more are approaching it. Well conceived assistance to them could accelerate the process and provide a larger probability of success.

This concept was discussed in general terms by the Heads of Agency Conference on Education at Bellagio in June 1972. In October 1973, it will be before the Second Conference of Agency Heads for their explicit review and approval as a development priority for joint support by a number of assistance agencies. Should this proposal be approved, it will provide AID with the extraordinary advantage of sharing with other agencies the opportunity and responsibility for helping LDC universities achieve the crucial transition from academic institutions to that of vital forces for national development.

Education in Other Sectors

In all development sectors, education is a major component necessary to long range solutions. While any definition of what constitutes "education" must be somewhat arbitrary, it is clearly a major part of most development programs. As noted previously there has been a sharp rise in AID's investments in education through other sectors.

This trend indicates that a major portion of the Agency's investment in education is becoming oriented more broadly toward specific development concerns. This is desirable. Although such investments are fully justified in terms of the priorities and goals of other sectors, they are, in fact, part of AID's education strategy.

We need also to keep in mind that our business is people not systems. In considering educational purposes, this means focusing on the learner -- being especially sensitive to segments of LDC populations who frequently are by-passed. These include hundreds of millions of people who cannot be accommodated in schools, to women, to whole rural enclaves of men and women, children and adults. Consequently, every activity supported by AID should have built into it a significant learning component, designed to encourage and help people whose lives are touched by the activity to learn useful things, to cope more effectively with their problems, to live more fruitful lives.

This concept poses difficult problems of communication and coordination within AID, and between AID and the developing countries. Within the Agency, it suggests less compartmentation by sector, more collaboration between technical offices, and between those offices and regional bureaus and missions. At the developing country level, it suggests a heightened emphasis on practical improvements in quality of life and a humanistic as well as economic approach to development.

Although the Bureau for Technical Assistance has certain responsibilities for intra-Agency communication and coordination, these can best be served when all elements of the Agency share a common set of objectives and concepts of development. While this is important in all sectors, it is crucial in the education sector, which is a fundamental ingredient of all development activities.

This internal coordination function can be enhanced by increased efforts at "networking", building linkages of joint research, information sharing and training/advisory services among LDC, developed-country and intermediate organizations with common interests in a particular problem area. This provides a framework for coordination and mutual support among disparate efforts, by different institutions, and between countries. AID's country missions should make particular efforts to encourage and assist LDC institutions in building linkages with worldwide networks of activity on problems of concern to local and national institutions.

AID Staff Orientation in Education

The concepts, principles and actions considered in this paper should be widely discussed by the staff of AID/W and by AID Missions. The dwindling number of education officers, the greatly reduced rotation of personnel between Washington and the field, and the uncertainties associated with any transition have resulted in serious problems of communication and programming in education. Thus special efforts are needed to bring into greater congruence the views of AID/W and field Missions. Although field experience has contributed heavily to the preparation of this paper, a thoughtful review of it by AID's field staff will be highly beneficial.

Accordingly, it is proposed that a series of seminars be organized which, over the next six months, will provide an opportunity for an exchange of views among all education and program officers having significant present or prospective responsibilities in education.

There are at present about 71 AID education officers, including some multisector officers, in the field, 31 in Latin America, 27 in Supporting Assistance countries, 8 in Africa and 5 in Asia. Consideration should be given to both re-orientation and possibly re-deployment of education officers in a manner consistent with the philosophy, emphasis and management of AID's present outlook on educational development.

The involvement of program officers in AID/W and in the field, and of selected Mission Directors, is essential to an effective understanding and direction of AID programs in education. Unless this is done, the Agency will encounter great difficulty in introducing new concepts into projects and programs.

Collaborative Style

References to "collaborative style" usually imply more responsiveness by AID to the views and priorities of developing countries. This is clearly essential and, indeed, there has been more of it in the past than is sometimes acknowledged. However, responsiveness does not necessarily mean agreement or acquiescence. It does mean more open-mindedness, less dogmatism, a willingness to listen, to learn and to act together. It means a candid recognition that developing countries have the right and responsibility for their own decisions, and that frequently the weight of knowledge and wisdom is on their side. But it also means that we must bear the final responsibility for deciding where and how AID funds can contribute most effectively to educational development.

Collaboration becomes real not through a change of "style" but through bona fide partnerships in finding solutions to problems.

With regard to collaboration with other development assistance agencies, some progress is being made. However, it is still far from sufficient.

During the past year, significant steps have been taken toward more effective coorperation with the World Bank and UNESCO, and with the Rockefeller and Ford Foundations. These need to be strengthened in specific key problem areas.

The Conference on Education by Heads of Agencies, initiated in 1972, gave concrete promise of fostering greater mutual understanding, sharing of knowledge and joint support of selected projects by a variety of donor agencies, bi-lateral and multi-lateral, public and private. Important as these conferences are, however, they can mean very little unless their thrust toward collaboration is taken seriously at all levels of each agency, and particularly at the country and mission level.

Such collaborative efforts are time-consuming and sometimes produce limited results. Nevertheless, the fact remains that intelligent cooperation among the development assistance agencies can multiply their effectiveness in educational development, and jointly they can provide a more rational design for helping developing countries utilize their own resources as well as external assistance.

Finally, it should again be emphasized that there is a need for greater collaboration within the Agency - between and among the several Bureaus and field missions. Though there are manifestly differences between the AID Regions and individual countries, the philosphy, objectives and principles which guide AID in its support of educational development can and should be more commonly shared and better understood than they are today.

Although the Bureau for Technical Assistance has special responsibility for leadership in developing educational concepts, policies, research and evaluation, all the other Bureaus share this responsibility. Moreover, the primary responsibility for assisting the developing countries to achieve

acceptable educational development rests with the Regional Bureaus.

It should also be recognized that as the direct-hire staff of the Agency declines, increased reliance must be place on the U.S. institutions selected by AID to provide the technical assistance and research for educational development. A closer and more fruitful partnership with them is absolutely essential to the successful performance of the mission of the Agency.

APPENDIX

A Note on the Data

Quantitative analyses of AID investments in education are difficult to make on the basis of data collected over the years. The problem arises primarily from the nature of education. It takes place in a great multiplicity of ways, at every point where development assistance investments are made. In some, it is the primary objective, in others a secondary aim, and in yet others is an incidental but important component.

Further complicating the problem is the Agency's classification and code structure for development sectors. Substantial numbers of projects are multi-purpose and are classified as miscellaneous, even though their component parts are clearly classifiable under specific sub-sectors.

For these and other reasons, the data contained in the following tables are not put forward as complete or entirely accurate; but they are probably sufficiently accurate to support the main conclusions derived from them.

Modification of the Agency's classification, coding, reporting and accounting system is required to permit better and more timely analysis of education program planning, implementation, evaluation and accounting.

TABLE I

TOTAL AMOUNTS OBLIGATED[1/] FOR EDUCATION ACTIVITIES BY SECTOR, FY 1960 - FY 1970
(In Thousands of Dollars)

Sector[2/]	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Total
Food & Agriculture	5,599	5,003	17,904	16,875	12,650	12,624	8,812	10,425	7,663	6,518	8,368	112,441
Industry & Mining	3,148	2,136	2,275	1,632	227	1,231	5,341	3,060	3,137	233	-	22,456
Health & Sanitation	4,310	3,701	12,687	12,043	8,050	2,025	4,756	9,858	3,222	5,686	3,564	69,902
Transportation	598	195	1,419	702	519	196	157	1,276	65	548	-	5,675
Labor[3/]	1,193	2,082	3,049	19,407	40,588	713	22,401	16,865	890	1,236	724	109,148
Public Administration	6,242	3,921	4,484	2,513	1,016	1,232	2,302	1,501	3,435	1,862	624	29,132
Community Development and Housing	43	337	190	720	128	35	457	238	160	287	488	3,083
General and Misc.	5,955	8,562	6,362	7,445	5,657	2,837	6,509	5,348	5,846	8,953	4,220	67,694
Public Safety	-	193	510	1,005	917	508	282	81	137	165	76	3,874
SUB-TOTALS	27,124	26,130	48,380	62,342	69,752	21,401	51,017	48,652	24,555	25,488	18,064	423,405
EDUCATION	50,324	46,946	158,461	191,378	111,285	144,154	127,153	150,735	151,551	95,236	152,224	1,379,447
TOTALS	77,448	73,076	207,341	253,720	181,037	165,555	178,170	199,387	176,106	120,724	170,288	1,802,852

1/ Amounts represent sums of all individual projects reported in the annual project summary publications (W-132) for the fiscal years 1960 through 1970, with the exception of loans (authorizations) data obtained from other sources. Dollar equivalents for projects wholly or partially funded with U.S.-owned local currency are included in the amounts reported in this table, except for 1969 and 1970, for which local currency amounts could not be obtained.

2/ Figures shown for each sector represent amounts obligated for projects which could be considered as unmistakably education or training activities. In those cases where some doubt arose, as for example where education was one component among several encompassed in the same project (e.g., agricultural research, education and extension), such projects were excluded.

3/ Fluctuations in amounts for years 1963-67, and particularly low figure for 1965 due to heavy local currency funding of Craftsmen Training Project for India. No local currency investment was made in the project for FY 1965, or after FY 1967.

TABLE II

OBLIGATIONS FOR EDUCATION ACTIVITIES FOR ALL SECTORS AND FOR EDUCATION SECTOR ONLY AS COMPARED TO TOTAL ECONOMIC ASSISTANCE PROGRAM, FY 1960 - FY 1970

(In Thousands of Dollars) 1/

Fiscal Year	AID ECONOMIC ASSISTANCE PROGRAM				OBLIGATIONS FOR EDUCATION, ALL SECTORS		OBLIGATIONS FOR EDUCATION ACTIVITIES: EDUCATION SECTOR ONLY (ABSOLUTE AND RELATIVE)							
	Grants (1)	Loans (2)	U.S.-Owned Local Currency 2/ (3)	Total (4)	Total Amount (5)	Per Cent (5)÷(4) (6)	Grants (7)	Per Cent (7)÷(1) (8)	Loans (9)	Per Cent (9)÷(2) (10)	Local Currency 2/ (11)	Per Cent (11)÷(3) (12)	Total (13)	Per Cent (13)÷(4) (14)
1960	1,255,200	515,900	165,025	1,936,125	77,448	4.0	44,274	3.5	0	-	6,050	3.7	50,324	2.6
1961	1,272,200	659,300	304,705	2,236,205	73,076	3.3	46,100	3.6	0	-	846	3/	46,946	2.1
1962	1,180,000	1,314,800	704,522	3,199,322	207,341	6.5	90,589	7.7	540	3/	67,332	9.6	158,461	5.0
1963	954,000	1,346,000	626,740	2,926,740	253,720	8.7	74,767	7.8	13,300	1.0	103,311	16.5	191,378	6.5
1964	808,000	1,333,000	698,259	2,839,259	181,037	6.4	67,483	8.4	20,450	1.5	23,352	3.3	111,285	3.9
1965	904,000	1,129,000	667,534	2,700,534	165,555	6.1	66,638	7.4	9,400	1.0	68,116	10.2	144,154	5.3
1966	1,326,000	1,228,000	473,812	3,027,812	178,170	5.9	58,767	4.4	4,750	3/	63,636	13.4	127,153	4.2
1967	1,162,000	1,091,000	702,466	2,955,466	199,387	6.7	67,704	5.8	37,165	3.4	45,866	6.5	150,735	5.1
1968	963,000	929,000	502,011	2,394,011	176,106	7.4	63,771	6.6	74,400	8.0	13,380	2.7	151,551	6.3
1969	879,000	570,000	-	1,449,000	120,724	8.3	69,686	7.9	25,550	4.5	-	-	95,236	6.6
1970	988,000	680,000	-	1,668,000	170,288	10.2	71,074	7.2	81,150	11.9	-	-	152,224	9.1 4/
TOTALS	11,691,400	10,796,000	4,845,074	27,332,474	1,802,852	6.6	720,853	6.2	266,705	2.5	391,889	8.1	1,379,447	5.0

1/ Sources: Columns (1) and (2) derived from "U.S. Economic Assistance Programs Administered by AID and Predecessor Agencies," April 3,1948 - June 30, 1970 Office of Statistics and Reports. Columns (3), (5), (7) and (11) derived from Annual Project Summary Publications (W-132). Column (9) from various sources (e.g., Congressional Presentation, Operations Reports, LAIS Reports). Listed in column (9) are gross amounts authorized for each fiscal year. Amounts for Assistance Programs for Greece, Japan and Europe have been excluded from all tabulations.

2/ Local currency figures not available for FY 1969 and FY 1970.

3/ Less than 1 per cent. 4/ Higher per cent for 1970 as compared with 1969 due in large part to $65 million in sector loans in Latin America.

TABLE III

OBLIGATIONS[1] FOR EDUCATION ACTIVITIES BY SECTOR FOR GEOGRAPHICAL REGIONS, FY 1960 - FY 1970
(In Thousands of Dollars)

Sector[2]	GEOGRAPHICAL REGIONS				
	SA	ASIA	AFRICA	LATIN AMERICA	TOTALS
Food and Agriculture	4,630	32,743	45,443	28,773	111,589
Industry and Mining	3,374	10,589	1,376	7,117	22,456
Health and Sanitation	17,267	39,112	6,030	7,349	69,758
Transportation	-	1,624	2,328	1,723	5,675
Labor	6	100,798	3,439	4,813	109,056
Public Administration	2,556	9,005	10,352	7,087	29,000
Community Development and Housing	372	156	1,237	1,298	3,063
Public Safety	-	1,175	1,657	1,039	3,871
General and Miscellaneous	4,456	23,144	12,358	22,725	62,683
SUB-TOTALS	32,661	218,346	84,220	81,924	417,151
EDUCATION	87,718	503,531	266,182	407,647	1,265,078[3]
TOTALS	120,379	721,877	350,402	489,571	1,682,229[4]

1/ Amounts represent sums of all individual projects reported in the annual project summary publications (W-132) for the fiscal years 1960 through 1970, with the exception of loans (authorizations) data obtained from other sources. Dollar equivalents for projects wholly or partially funded with U.S.-owned local currency are included in the amounts reported in this table, except for 1969 and 1970, for which local currency amounts could not be obtained

2/ Figures shown for each sector represent amounts obligated for projects which could be considered as unmistakably education or training activities. In those cases where some doubt arose, as for example where education was one component among several encompassed in the same project (e.g., Agricultural Research, Education and Extension), such projects were excluded.

3/ This amount does not include $114,369,000 for non-regional education projects.

4/ This amount does not include $120,623,000 for non-regional education activities.

TABLE IV

Percentage Distribution[1] Of Obligations For Education Sub-Sectors, By Region and AID/W:
FY 1960 - FY 1970[2]

Education Sub-Sectors[3]	A S I A		A F R I C A		LATIN AMERICA		VN		AID/W		TOTALS	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
610 Technical Education	35,113	12	36,384	14	14,683	7	7,824	16	0	0	94,004	10
620 Voc., Agric. Education	2,674	1	10,034	4	1,175	1	691	1	120	*	14,694	2
630 Home Economics Education	1,169	1	17	*	1	*	0	0	0	0	1,187	*
640 Elementary Education	11,889	4	21,120	8	44,417	20	7,427	15	5,583	4	90,436	10
650 Secondary Education	9,862	3	30,272	12	21,798	10	7,740	16	2,600	2	72,272	8
660 Prof. & Higher Ed.	131,039	46	86,536	34	41,000	19	7,489	16	103,417	75	369,481	39
670 Adult & Community Ed.	4,481	2	1,027	*	1,808	1	161	*	44	*	7,521	1
680 Education Administration	2,471	1	9,704	4	8,746	4	0	0	1,018	1	21,939	2
690 Other Education (Misc.)	85,966	30	59,311	23	84,822	39	16,835	35	25,105	18	272,039	29
TOTALS	284,664		254,405		218,450		48,167		137,887		943,573	

* Less than 1 per cent
1/ Represents Per Cent of Total Obligations (Last line) committed to sub-sector activities.
2/ Source: PPC/OPR W-253 (6-30-70)
3/ Obligations reported here do not include Education Sector Loans or U.S.-owned local currency.

TABLE V
A.I.D. TECHNICAL ASSISTANCE PROJECTS IN EDUCATION (CODE 600) FY 1971-75
(IN THOUSANDS OF DOLLARS)

Region	Number of Projects	Obligations FY 1971	Obligations FY 1972	Estimated Obligations FY 1973	Estimated Obligations FY 1974	Estimated Obligations FY 1975	Totals	Totals Including Anticipated Obligations
LATIN AMERICA	33	11,024	9,385	9,532 (c) 500 (a)	6,135 (c) 900 (a)	4,765 (c) 1,000 (a)	40,841 (c) 2,400 (a)	43,241
ASIA	18	7,414	5,655	4,172 (c) 1,675 (a)	3,672 (c) 2,187 (a)	3,920 (c) 2,796 (a)	24,833 (c) 6,658 (a)	31,491
AFRICA	38	12,006	12,346	9,483 (c) 196 (a)	9,690 (c) 516 (a)	6,320 (c) 662 (a)	49,845 (c) 1,374 (a)	51,219
SUPPORTING ASSISTANCE	14	11,477	7,953	9,530 (c) -- (a)	7,138 (c) 250 (a)	5,860 (c) 250 (a)	41,958 (c) 500 (a)	42,458
TAB	5	1,050	679	90 (c) 650 (a)	-- (c) 1,275 (a)	-- (c) 1,600 (a)	1,819 (c) 3,525 (a)	5,344
TOTALS	108	42,971	36,018	32,807 (c) 3,021 (a)	26,635 (c) 5,128 (a)	20,865 (c) 6,308 (a)	159,296 (c) 14,457 (a)	173,753
COMBINED(c & a)	108	42,971	36,018	35,828	31,763	27,173	173,753	

c= Projects Active in FY 1973
a= Projects Anticipated Between FY 1973-75
Source: Tables Prepared by Regional Bureaus and TAB
Date: December 6, 1972

TABLE VI

BUREAU FOR TECHNICAL ASSISTANCE:
PAST (FY 1971 - FY 1972) AND PROJECTED (FY 1973 - FY 1975) OBLIGATIONS
FOR GTS PROJECTS IN EDUCATION, BY OFFICE
(In Thousands of Dollars)

Bureau for Technical Assistance Offices	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	TOTALS 2/
Education and Human Resources	1,050	679	740 1/	1,275 1/	1,600 1/	5,344
Agriculture	478	475	527	511	535	2,526
Development Administration	334	112	237	451	238	1,372
Urban Development	0	0	0	10	0	10
Science and Technology	143	123	49	0	0	315
Health	76	137	18	95	95	421
Nutrition	0	76	27	260	40	403
TOTALS	2,081	1,602	1,598	2,602	2,508	10,391

1/ Total proposed. 2/ Includes actual obligations for FY 1971 and FY 1972 and estimated obligations for FY 1973, FY 1974, and FY 1975.
Source: Tables prepared by TAB offices. Date: December 8, 1972.

TABLE VII
Bureau for Population and Humanitarian Assistance: Obligations for Education Components, FY 1971-1975[1/]
(In Thousands of Dollars)

ELEMENTS OF PHA BUREAU INCLUDED	NUMBER OF PROJECTS	1971	1972	1973	1974	1975	TOTALS[2/]
Regional Divisions							
Africa	22	5,279	2,094	3,165	4,871	2,737	18,146
Asia	12	2,377	2,533	2,074	1,047	0	8,031
Latin America	17	5,584	6,758	5,066	3,520	2,819	23,747
Foreign Disaster Relief	1	29	55	65	65	65	279
Manpower & Institutions	11	4,232	1,444	5,631	4,873	3,722	19,902
Information, Education & Communications	10	3,228	3,239	1,708	3,531	7,100	18,806
Family Planning Services	10	4,392	6,067	9,859	10,070	10,700	41,088
Population Research	7	420	760	250	900	140	2,470
Demographic & Economic Analysis	3	737	1,417	2,845	2,752	3,168	10,919
Private & Voluntary Cooperation	2	3,785	3,840	3,863	3,918	4,155	19,541
TOTALS	95	30,063	28,187	34,526	35,547	34,606	162,929

1/ Estimated by examination of each individual project.
2/ Includes actual obligations for FY 1971 and FY 1972; estimated obligations for FY 1973, FY 1974 and FY 1975.
Source: Tables Prepared by Bureau for PHA

Date: December 8, 1972

TABLE VIII

OBLIGATIONS FOR ACTIVE TECHNICAL ASSISTANCE PROJECTS IN EDUCATION BY REGIONAL BUREAU BY EDUCATION SUB-SECTOR, FY 1971-FY 1975
(In Thousands of Dollars)

REGION	Technical Education	Vocational Agricultural Education	Home Economics Education	Elementary Education	Secondary Education	Professional and Higher Education	Fundamental Adult & Community Education	Educational Administration	All Other Education	Tech'l Support Education	TOTALS[1/]
AFRICA											
FY 1971	1,283	-	-	-	611	6,058	-	965	2,880	220	12,017
FY 1972	2,335	-	-	-	275	6,442	-	1,171	1,825	287	12,335
FY 1973 (Est.)	2,193	-	-	-	-	5,750	-	1,005	443	92	9,483
FY 1974 (Est.)	1,827	-	-	-	-	5,861	-	877	1,063	62	9,690
FY 1975 (Est.)	885	-	-	-	-	4,495	-	540	400	-	6,320
SUB-TOTALS[1/]	8,523	-	-	-	88[illegible]	28,606	-	4,558	6,611	661	49,845
ASIA											
FY 1971	463	-	-	-	-	3,833	-	519	2,599	-	7,414
FY 1972	194	-	-	-	-	2,127	-	341	2,993	-	5,655
FY 1973 (Est.)	-	-	-	-	-	1,863	-	-	2,309	-	4,172
FY 1974 (Est.)	-	-	-	-	-	1,500	-	-	2,172	-	3,672
FY 1975 (Est.)	-	-	-	-	-	1,310	-	-	2,210	-	3,920
SUB-TOTALS[1/]	657	-	-	-	-	11,033	-	860	12,283	-	24,833

Source: Tables prepared by Regional Bureaus
Date: December 8, 1972

1/ Includes actual obligations for FY 1971 and FY 1972; estimated obligations for FY 1973, FY 1974 and FY 1975.

TABLE VIII (Continued)

REGION	Technical Education	Vocational Agricultural Education	Home Economics Education	Elementary Education	Secondary Education	Professional and Higher Education	Fundamental Adult & Community Education	Educational Administration	All Other Education	Tech'l Support Education	TOTALS[1/]
LATIN AMERICA											
FY 1971	-	-	-	-	-	3,303	352	1,064	6,305	-	11,024
FY 1972	-	-	-	-	-	2,609	294	878	5,604	-	9,385
FY 1973 (Est.)	-	-	-	-	-	2,717	225	1,054	5,536	-	9,532
FY 1974 (Est.)	-	-	-	-	-	676	200	1,118	4,141	-	6,135
FY 1975 (Est.)	-	-	-	-	-	418	200	800	3,347	-	4,765
SUB-TOTALS[1/]	-	-	-	-	-	9,723	1,271	4,914	24,933	-	40,841
SUPPORTING ASSISTANCE											
FY 1971	1,780	-	-	637	435	3,318	-	-	4,437	870	11,477
FY 1972	340	-	-	282	48	2,436	-	-	4,355	492	7,953
FY 1973 (Est.)	242	-	-	150	-	2,259	-	-	6,588	291	9,530
FY 1974 (Est.)	-	-	-	1,300	-	1,270	-	-	4,280	288	7,138
FY 1975 (Est.)	-	-	-	1,000	-	337	-	-	4,427	96	5,860
SUB-TOTALS[1/]	2,362	-	-	3,369	483	9,620	-	-	24,087	2,037	41,958
ALL REGIONS: GRAND TOTAL[1/]	11,542	-	-	3,369	1,369	58,982	1,271	10,332	67,914	2,698	157,477

TABLE IX

Percentage Distribution Of Obligations For Education Sub-Sectors, By Region:
FY 1960-70 and FY 1971-75[1/]

	ASIA		AFRICA		LATIN AMERICA		VN	SA	ALL REGIONS	
Education Sub-Sectors[2/]	1960-70	1971-75	1960-70	1971-75	1960-70	1971-75	1960-70	1971-75	1960-70	1971-75
Technical Education	12	3	14	17	7	0	17	6	10	7
Voc'l, Agric'l. Education	1	0	4	0	1	0	1	0	2	0
Home Economic Education	1	0	0	0	0	0	0	0	*	0
Elementary Education	4	0	8	0	19	0	16	8	10	2
Secondary Education	3	0	12	2	10	0	16	1	8	1
Professional & Higher Education	46	44	34	58	19	24	15	23	39	37
Fundamental Adult & Community Education	2	0	0	0	1	3	1	0	1	1
Education Administration	1	3	4	9	4	13	0	0	2	7
Other Education (Misc.)	30	50	24	14	39	60	34	62	29	45

* Less than 1 per cent.

1/ Sources: PPC/OPR W-253 (6-30-70)
Tables prepared by Regional Bureaus (12-8-72)

2/ Includes Grants, mixed (grants and loans), and project loans. Does not include Sector Loans or U.S.-owned local currency.

TABLE X
TOTAL ALLOCATIONS FOR EDUCATION ACTIVITIES, FY 1971 - FY 1975
(In Thousands of Dollars)

Category	FY 1971	FY 1972	FY 1973	FY 1974	FY 1975	TOTAL
Loans:						
Actual Disbursements	54,983	24,113				
Estimated Disbursements			64,477	82,795	80,184	306,552
Education Sector Technical Assistance:						
Actual Obligations	41,932	35,328				
Estimated Obligations			32,717	26,635	20,465	157,077
Non-Education Sectors Technical Assistance:						
Actual Obligations	39,046	37,010				
Estimated Obligations			40,567	41,820	36,657	195,100
Bureau for Population & Humanitarian Assistance:						
Actual Obligations	30,063	28,187				
Estimated Obligations			34,526	35,547	34,606	162,929
Bureau for Technical Assistance:						
Actual Obligations	2,081	1,602				
Estimated Obligations			1,598	2,602	2,508	10,391
Totals:						
Actual	168,105	126,240				
Estimated			173,885	189,399	174,420	832,049